

Appl. No.: 09/981,511
Amdt. dated July 24, 2003
Reply to Office action of April 29, 2003

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- Sub C17
1. (Currently amended) A component restraint system that is used to secure an electronic component to a circuit board, comprising:
- a backing plate;
 - a post extending from said backing plate, said post having a plurality of stop surfaces;
 - a spring radially disposed around said post; and
 - a clip which, when inserted onto said post, engages a stop surface of said post and compresses said spring,
- wherein said plurality of stop surfaces permits said spring to be variably compressed.
2. (Original) The restraint system of claim 1 further including a plurality of posts protruding from said backing plate, each post having a clip and a spring disposed thereon.
3. (Original) The restraint system of claim 1 further including four posts protruding from said backing plate and including stop surfaces, each post having a clip and a spring disposed thereon.
4. (Original) The restraint system of claim 2 wherein each post has an upper end distal from said backing plate and the clip for each post is pushed down over the upper end until the clips engage the stop surfaces of the posts.
5. (Original) The restraint system of claim 4 wherein said electronic component and circuit board are disposed between said backing plate and said
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springs and, as said springs are compressed by said clips, said electronic component is secured to said circuit board.

6. (Original) The restraint system of claim 5 further including heat sink also disposed between said backing plate and said springs, said heat sink further disposed between said electronic component and said springs.

7. (Previously amended) The restraint system of claim 4 wherein said upper ends of said posts comprise tips formed between the distal end of the post and the stop surfaces, each tip having a smaller cross section at its distal end than at the stop surfaces.

8. (Original) The restraint system of claim 4 wherein said upper ends of said posts are substantially conically shaped.

9. (Previously amended) The restraint system of claim 1 wherein said clip includes protruding members which define a hole in which said post is inserted, said protruding members are pushed apart as said clip is pushed along said post towards a stop surface.

10. (Canceled).

11. (Currently amended) An electronic assembly, comprising:
a circuit board;
a backing plate;
a plurality of springs;
a plurality of posts extending from said backing plate through said circuit board and said springs, ~~each post having a plurality of stop surfaces;~~
an electronic component and heat sink sandwiched between said circuit board and said springs; and

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a plurality of clips, one clip per post; ~~which, when inserted onto said posts, are pushed down the posts towards said backing plate until the clips engage the stop surfaces of said posts, said clips compress said springs as the clips are pushed toward said stop surfaces.~~

wherein each clip is adapted to engage one of the posts in a plurality of different positions to compress one of said springs to one of a plurality of different compressive forces.

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12. (Currently amended) The circuit board of claim 11 ~~wherein each clip includes protruding members which define a hole in which said post is inserted, said protruding members are pushed apart as said clip is pushed down said post towards a stop surface.~~ engages said post in three different positions.

13. (Currently amended) The circuit board of claim 11 in which ~~said posts have a distal end opposite said backing plate that includes a tip that has a cross section that increases from the distal end of the post towards the stop surfaces.~~ each clip can compress one of said springs to three different positions on said post.

14.-19. (Canceled).

20. (Currently amended) A computer system, comprising:
a processor and heat sink;
an output device coupled to said processor;
a circuit board;
a backing plate;
a plurality of springs;
a plurality of posts extending from said backing plate through said circuit board and said springs, ~~each post having a plurality of stop surfaces;~~

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said processor and heat sink disposed between said circuit board and said springs; and

a plurality of clips, one clip per post, ~~which, when inserted onto said posts, are pushed down the posts towards said backing plate until the clips engage the stop surfaces of said posts, said clips compress said springs as the clips are pushed toward said stop surfaces.~~

wherein each of said clips has clip members that are pushed apart to engage the posts in a plurality of different positions

21. (New) The computer system of claim 20 wherein in each of said clips, a portion of the clip is bent downward.

22. (New) The computer system of claim 21 wherein said portion of said clip that is bent downward limits the rotational movement of said clip relative to said post.

23. (New) The computer system of claim 20 wherein said clip is fabricated from metal.

24. (New) The computer system of claim 20 wherein upon removal of said clip from said post, said clip members return to an initial position.